

ENVIRONMENTAL Fact Sheet



West Spokane County

June 2006

June 2006 Update on EPA activities in the Deep Creek area

Two new contaminants found in local wells.

The Environmental Protection Agency (EPA) continues to test drinking water around Euclid Road in the Deep Creek area of west Spokane county after discovering a chemical called trichloroethylene (TCE) in local wells in 2004 and 2005.

EPA completed another round of sampling in March 2006 and has found two more contaminants in well water. These chemicals, perchlorate and N-nitrosodimethylamine (NDMA) were found in levels that do not pose an immediate public health threat to the general population. However, the Spokane Regional Health District, the Washington Department of Health and EPA are concerned that these chemicals could pose a health threat if they increase and are consumed for a long time.

If your well has been tested by EPA, the test results have been sent to you. EPA will continue to test drinking water in the Deep Creek area for TCE, perchlorate and NDMA through August 2006. If you are concerned about other chemicals in your water, such as nitrate (associated with sources such as septic systems and agriculture), please contact the Spokane Regional Health District for more information on testing.

Background:

EPA has been testing well water near the former Fairchild Nike Battery 87 since 2004. In October 2004, test results showed that water from one well contained high levels of TCE, a commonly used solvent. Knowing that residents in the area rely on wells for drinking water, EPA tested water from 22 homes and some monitoring wells. Three households

had higher levels of TCE than allowed by federal drinking water standards and EPA installed water-treatment systems in those homes to remove the TCE.

In March and April 2006, nineteen drinking water wells were tested for TCE, perchlorate, and NDMA. All of the wells had small amounts of perchlorate and five homes had small amounts of NDMA. One well had all three chemicals. We do not know if the TCE, perchlorate, and NDMA are moving together or separately through the water underground. EPA hopes to learn more about where these chemicals have been, where they are now, and where they are going by continuing to test well water.

Where did the contamination come from?

The former Fairchild Nike Battery 87 is considered a possible source of the TCE since it has been commonly used at military facilities. However, TCE can be used for degreasing machinery and other equipment so EPA added tests for perchlorate and NDMA to see if we could rule out the Battery as a possible source. We chose to test for perchlorate and NDMA because they have been found together at other former solid and liquid rocket fuel sites.

Since we did find perchlorate and NDMA together, EPA now considers the Fairchild Nike Battery 87 a likely source of the contamination but the exact source or method of contamination is still unknown. It is possible that these chemicals were spilled on the ground in various locations or there may be buried drums which are leaking chemicals into the water. Until we have more information about how these chemicals got into the water, where they got into the water, and how much got into the water, we will not know if the chemicals are increasing or decreasing in people's drinking water.

Next steps:

Because EPA considers the former Fairchild Nike Battery 87 to be the most likely source of the contamination, it recently asked that Corps of Engineers take over long-term management of this site. That would include continued testing of well water and maintaining of water filters. At this time, the Corps has declined to become involved in the investigation, but EPA is continuing to work with the Corps to develop a plan.

EPA also is working with the health departments of the State of Washington and Spokane County, as well as the federal Agency for Toxic Substances and Disease Registry (ATSDR) to address health issues. We are working with those and other relevant agencies as we plan for future sampling and investigations in the Deep Creek area.

EPA will send out another update by the end of August on the status and future of drinking water monitoring.



EPA continues to test Deep Creek wells

More About Perchlorate, NDMA, and TCE

Perchlorate can come from natural or man-made sources. Perchlorate salts are used in solid rocket fuel, missiles, fireworks, highway safety flares, and a number of other products. Perchlorate can occur naturally in certain types of mineral formations such as Chilean nitrates but those are not used in the Deep Creek area. One study in west Texas also suggests a link between irrigated agriculture and naturally forming perchlorate. A water treatment technology called reverse osmosis has been effective in removing perchlorate from drinking water.

NDMA has been found near rocket fuel facilities and also in areas where chlorinated waste water has been used to recharge aquifers. It also is found in some foods such as cured meats. The most effective way to remove NDMA from water is to treat it with high intensity ultraviolet light (UV).

TCE is a commonly used degreaser and it is an ingredient in many products such as paint removers and adhesives. TCE is a colorless liquid with a sweet smell and taste. Carbon filters are highly effective in removing TCE from water.

Health Considerations.

The Washington State Department of Health and the Spokane Regional Health District reviewed results of the EPA well testing from early 2006 for TCE, perchlorate, and NDMA. The following information summarizes their findings:

Drinking contaminated water is the typical way people can be exposed to TCE, perchlorate and NDMA. People can also be exposed to TCE while cooking and showering because it can evaporate from the water and enter the surrounding air. TCE exposure can also occur through skin contact. Perchlorate and NDMA do not release into the air easily so exposure during showering or cooking is unlikely. Perchlorate and NDMA also are not expected to enter the body directly through the skin.

There is no evidence that perchlorate is a cancer causing chemical for humans. High doses of this chemical, however, can affect the uptake of iodine by

the thyroid gland. The low levels of perchlorate found in the drinking water wells in early 2006, however, are not expected to affect iodine uptake.

The amount of TCE and NDMA found in these drinking water wells is very small. It is considered to be below levels of concern for long-term exposure. Much higher doses of these chemicals have been shown to cause liver problems and cancer in laboratory animals. The very low levels in these wells represent only a very small risk. People concerned about limiting or eliminating these very low exposures can use bottled water, treat well water, or use some other water source.

The Washington State Department of Health is preparing a health consultation report that will further discuss its findings about the TCE, perchlorate, and NDMA in groundwater. The report will be available later this summer.

Contacts:

For questions about TCE, perchlorate and NDMA and your health, please contact:

Mike LaScuola, Spokane Regional Health District
509-324-1574 or **mlascuola@spokanecounty.org**

Please contact Renée Dagseth if you have questions about this site or if you have information about the possible sources of contamination.

Renée Dagseth, Community Involvement Coordinator
800-424-4372 or **206-553-1889** or **dagseth.renee@epa.gov**

If you have questions about whether your well has been tested or needs to be tested, contact:

Calvin Terada, On-Scene Coordinator
206-553-4141 or **terada.calvin@epa.gov**

To request a copy of the Washington State Department of Health's health consultation report that will be available later this summer, contact:

Barbara Trejo
Toll Free **1-877-485-7316** or **barbara.trejo@doh.wa.gov**

Future Information

To receive future fact sheets via e-mail, please send your e-mail address to **dagseth.renee@epa.gov**



United States
Environmental Protection Agency
Region 10

Pre-Sorted Standard
Postage and Fees Paid
U.S. EPA
Permit No. G-35
Seattle, WA

Euclid Road Update
Spokane County, Washington
June 2006



*Please contact Renée Dagseth if you need information in an alternative format.
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